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-- This is a division of Application No. 09/578,757, filed May 25, 2000. Application No. 09/578,757 claims the benefit of U.S. Provisional Patent Application No. 60/135,765 entitled METHOD AND APPARATUS FOR A MINE COMMUNICATIONS SYSTEM, filed on May 25, 1999 --

In the Abstract ~~delete~~ Title on line 1, page 60.

IN THE CLAIMS:

Please cancel ~~claims~~ claims 1-75, and add new claims 76-87 as follows.

76. (NEW) A powerline communication system for communicating in areas where amount of energy used for communications is limited, comprising:
a signal processor;
one or more interface connector ports; and
a plurality of signal lines connected from the signal processor to the one or more interface connector ports; and
an AC powerline modem connected to the signal processor via one of the one or more interface connector ports; and
a transceiver connected to the AC powerline modem,
wherein the AC powerline modem modulates and demodulates the signals for transmission and reception over the AC powerline to another signal processor, and the signals received via the transceiver can be transmitted via the AC powerline modem through the AC powerline to the another signal processor, and the signals received from the another signal processor can be transmitted by the transceiver to propagate the signals within a desired range of area.

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77. (NEW) The powerline communication system as claimed in claim 76, further including:

one or more peripheral devices connected to the signal processor,

wherein the signals transmitted and received by the signal processor can be monitored at the peripheral devices.

78. (NEW) The powerline communication system as claimed in claim 76, wherein the transceiver includes a radio frequency transceiver.

79. (NEW) The powerline communication system as claimed in claim 76, further including one or more indicator lamps coupled to the signal processor to signal status information of the system.

80. (NEW) The powerline communication system as claimed in claim 76, wherein the peripheral device includes a personal computer.

81. (NEW) The powerline communication system as claimed in claim 76, further including a capacitor bridge for connecting to another one of powerline communication system.

82. (NEW) The powerline communication system as claimed in claim 76, further including a galvanically-isolated serial ports for connecting to another one of powerline communication system.

83. (NEW) The powerline communication system as claimed in claim 76, further including a galvanically-isolated RS-232

serial connection for connecting to another one of powerline communication system.

84. (NEW) The powerline communication system as claimed in claim 76, wherein one or more of the plurality of signal lines include:

a signal line to receive a signal representing intensity of received radio signal from the transceiver.

85. (NEW) The powerline communication system as claimed in claim 76, wherein the transceiver further includes an antenna to receive and transmit signals.

86. (NEW) The powerline communication system as claimed in claim 76, wherein the transceiver further includes:

a receiving antenna to receive signals; and
a transmitting antenna to transmit signals.

87. (NEW) A method of providing powerline communication system for communicating in areas where amount of energy used for communications is limited, comprising:

connecting a first AC power system with a capacitor bridge to a second AC power system; and

galvanically isolating the first AC power system and the second AC power system by connecting a third AC power system to the second AC power system using galvanically-isolated RS-232 serial connection between the second AC power system and the third AC power system.